



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,997	06/23/2003	Toshiyuki Ito	4041J-000728	9822

27572 7590 02/07/2007  
HARNES, DICKEY & PIERCE, P.L.C.  
P.O. BOX 828  
BLOOMFIELD HILLS, MI 48303

EXAMINER
----------

SHORTLEDGE, THOMAS E

ART UNIT	PAPER NUMBER
----------	--------------

2626

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/07/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/601,997

Applicant(s)

ITO ET AL.

Examiner

Thomas E. Shortledge

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____   | 6) <input type="checkbox"/> Other: ____                           |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 101***

1. Claims 8-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 8 and 9 recite "a computer program that is run by a communication terminal..." merely defining functional descriptive material. The functional descriptive material must be in combination with an appropriate computer readable medium, and must be capable of producing a useful, concrete and tangible result when used in a computer system. The computer program as claimed is not in combination with an appropriate computer readable medium; therefore, claims 8-9 are directed to non-statutory subject matter.

2. Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 10 recites "determining a sound characteristic of the communication channel between the communication terminal and the voice recognition server," merely defining a signal and signals per se. are non-statutory subject matter.

## **DETAILED ACTION**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Brown et al. (US 6,574,601 B1).

As to claim 1, Brown et al. teach:

a communication terminal that transmits a voice signal through a communication network (transmitting a voice, Fig. 1, elements 22, 24, 28 and 30); and

a voice recognition server that recognizes the voice signal received from the communication terminal (speech recognition server, Fig. 1, element 34);

wherein the communication terminal adjusts a sound characteristic of the communication network for providing communication between the communication terminal and the voice recognition server (removing the echo from an input signal, col. 3, lines 28-35).

As to claim 2, Brown et al. teach:

the voice recognition server transmits a second voice signal to the communication terminal (the background signal is sent to the communication terminal, col. 3, lines 35-45),

the communication terminal produces a sound based on the second voice signal, receives the sound as a loop back voice signal, and transmits the loop back voice signal (background energy level is determined from the signal, and a sound is fed back into the system, col. 3, lines 25-62),

the voice recognition server receives and analyzes the loop back voice signal, and produces an adjustment data based on the analysis, the adjustment data represents a sound characteristic of the communication network and the communication terminal adjusts the sound characteristic based on the adjustment data. (analyses the background noise signal and produces an adjusted signal by removing the background noise from the input speech for the speech recognition process, col. 3, and lines 25-62).

As to claim 3, Brown et al. teach the second voice signal transmitted by the voice recognition server is a test pattern voice signal created by an electrical composition, and the communication terminal adjusts the sound characteristic of the communication network based on the adjustment data produced by the test pattern voice signal (the second signal is a pattern of background noise, and the input data is adjusted based on the background noise, col. 3, lines 25-62).

As to claim 4, Brown et al. teach the second voice signal transmitted by the voice recognition server is a voice signal that is created by a word of an operator of the voice recognition server, and the communication terminal adjusts the sound characteristic of the communication network based on the adjustment data produced by the second

Art Unit: 2626

voice signal (the second signal is created by input supplied by the user, and the inputted signal is adjusted based on that, col. 3, lines 25-62).

As to claim 5, Brown et al. teach a communication terminal used in a voice recognition system, for sending a voice signal to a voice recognition server via a communication network, the voice recognition server recognizes the voice signal received from the communication terminal, the communication terminal comprising (a speech recognition system within a network, Fig. 1, elements 22, 24, 28, 30 and 34):

an adjustment means for adjusting a sound characteristic of the communication network for providing communication between the communication terminal and the voice recognition server (removing the background noise from a input signal, echo cancellation, col. 2, lines 48-53 and col. 3, lines 25-62).

As to claim 6, Brown et al. teach:

a voice signal receiving means for receiving a second voice signal from the voice recognition server (the background signal is sent to the communication terminal, col. 3, lines 35-45);

a sound producing means for producing a test sound based on the second voice signal, a sound receiving means for receiving the test sound and for producing a loop back voice signal based on the received test sound (background energy level is determined from the signal, and a sound is fed back into the system, col. 3, lines 25-62);

Art Unit: 2626

a voice signal transmitting means for transmitting the loop back voice signal to the voice recognition server (transmitting the feedback to the speech recognition system, col. 3, lines 25-62);

an adjustment data receiving means for receiving an adjustment data from the voice recognition server, the adjustment data is produced by analyzing the loop back voice signal and represents a communication network; and an adjustment means sound characteristic of the for adjusting the sound characteristic of the communication network based on the adjustment data received from the voice recognition server by the adjustment data receiving means (based on the feedback signal, the input speech signal is adjusted to remove unwanted background noise, the adjusted signal is then used by the speech recognizer, col. 3, lines 25-62).

As to claim 7, Brown et al. teach:

a voice signal transmitting means for transmitting a second voice signal to the communication terminal (transmitting the feedback to the speech recognition system, col. 3, lines 25-62);

a loop back signal receiving means for receiving a loop back voice signal that is the second voice signal produced and received by the communication terminal (receiving the feedback signal that is the background noise, col. 3, lines 25-62);

an adjustment data producing means for producing an adjustment data of a sound characteristic of the communication network, the adjustment data is produced by analyzing the loop back voice signal received from the communication terminal; and an

Art Unit: 2626

adjustment data transmitting means for transmitting the adjustment data produced by the adjustment data producing means to the communication terminal (based on the feedback signal, the input speech signal is adjusted to remove unwanted background noise, the adjusted signal is then used by the speech recognizer, col. 3, lines 25-62).

As to claims 8 and 9, Brown et al. teach:

a process of receiving a second voice signal from the voice recognition server (the background signal is sent to the communication terminal, col. 3, lines 35-45);

a process of producing a test sound based on the second voice signal received from the voice recognition server (background energy level is determined from the signal, and a sound is fed back into the system, col. 3, lines 25-62);

a process of receiving the test sound and producing a loop back voice signal based on the received test sound; a process of transmitting the loop back voice signal to the voice recognition server (producing a feedback signal from the received background noise, col. 3, lines 25-62);

a process of receiving an adjustment data from the voice recognition server, the adjustment data is produced by analyzing the loop back voice signal and represents a sound characteristic of the communication network; and a process of adjusting the sound characteristic of the communication network based on the adjustment data received from the voice recognition server (based on the feedback signal, the input speech signal is adjusted to remove unwanted background noise, the adjusted signal is then used by the speech recognizer, col. 3, lines 25-62).



As to claim 10, Brown et al. teach at the communication terminal, determining a sound characteristic of the communication channel between the communication terminal and the voice recognition server; at the communication terminal, adjusting a received voice signal based on the determined sound characteristic; at the communication terminal, sending the adjusted voice signal to the voice recognition server through the communication network; and at the voice recognition server, recognizing the voice signal received from the communication terminal (determining the background noise of an incoming signal, and adjusting the signal to remove the background noise, the sending the signal to the speech recognition network, to recognition the incoming speech, col. 3, lines 25-62 and Fig. 1).

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas E. Shortledge whose telephone number is (571)272-7612. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)272-7602. The fax phone

Art Unit: 2626

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TS  
1/31/07



RICHMOND DORVIL  
SUPERVISORY PATENT EXAMINER